



Data & Analysis Center for Software

DACS Overview

<http://iac.dtic.mil/dacs>

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Information for the Defense Community 

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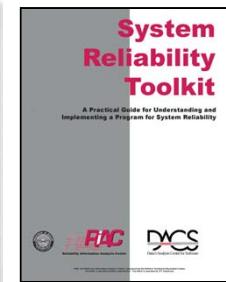
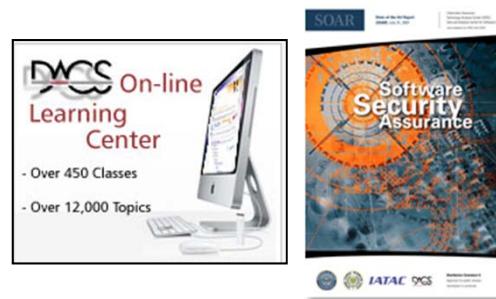
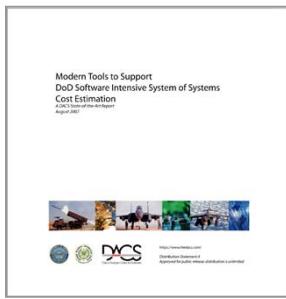
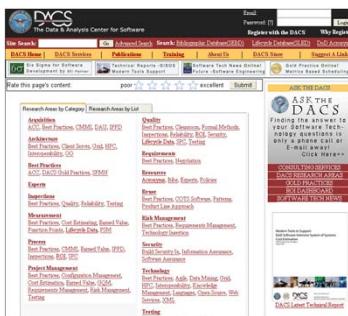
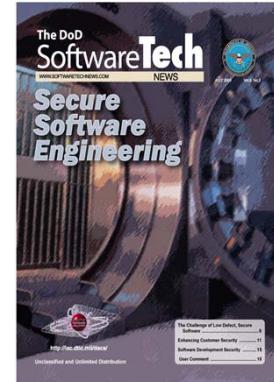
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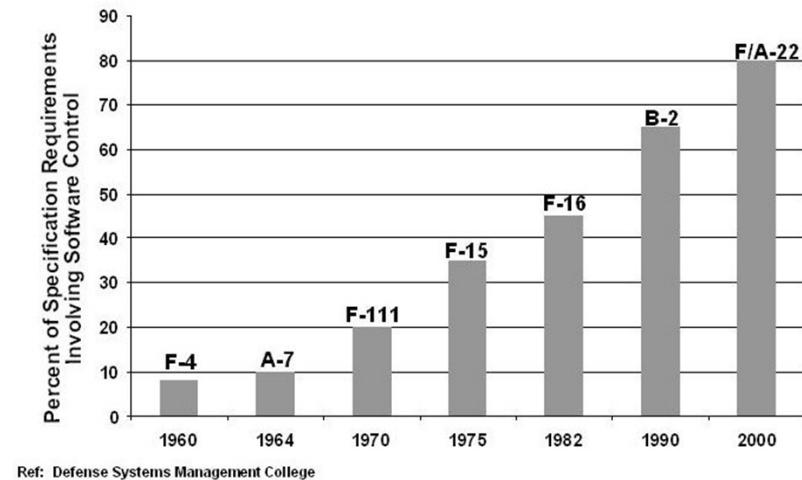
DACS Overview

- The DACS technical area of focus is Software Technology and Software Engineering, in its broadest sense.
- Central distribution hub for the latest software technology information sources.
- Wide variety of Technical Services to support the R&D, development, testing, validation, and transitioning of Software Engineering technology.





DACS STINFO Addresses Current Software Challenges



Ref: Defense Systems Management College

System Characteristics

- 10-100 MLOC
- 30-300 Ext. I/F
- Depth of Supplier Tier: 6-12
- 20-200 Coordination Groups

Future Combat Systems:

- 12,000 SoS Requirements - > 90,000
- 50 Critical Technologies
- 52 Complimentary Programs
- 40 Million Lines of Code

► Software Context in 2008

- Model Based Development Paradigm
- Net Centric Integration of Existing Systems
- COTS Integration
- Systems of Systems
- Ultra Large Systems

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DACS STINFO Addresses DoD Software Needs

- **Technology**
 - Lifecycle Development
 - State of the Art
 - Trends
- **Best Practices in Software Engineering**
- **Emerging Practices**
- **Acquisition Issues**
- **Software Project Management**

Customers

• JIEDDO	• DDR&E
• AFRL	• NSWC
• DARPA	• USACE
• ODUSD(A&T)	• ONR
• AAMDC	• MDA

Classes of Users

- Developers
- Researchers
- Acquirers
- Managers



Rich Resources for Users from the DACS

Hundreds of Resources

Research Areas by Category	Research Areas by List
Acquisition ACC , Best Practices , CMMI , DAU , IPPD	Quality Best Practices , Cleanroom , Formal Methods , Innovation , R&D , ROI , Standards

4 Hours Free

4 Hours Free

Download DACS Tech Journal

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DACS ROI Dashboard

In response to increasing interest and attention from the software engineering and software acquisition community for benefits data and related technical and management information, the DACS has developed the DACS ROI Dashboard. The DACS ROI Dashboard is a web-based application designed to facilitate the **Software Process Improvement** with the latest published data on benefits. The ROI Dashboard graphically displays open and publicly available data and provides standard statistical analysis of the data. To learn more about the features and usage of the ROI Dashboard, please read the [overview](#) or [FAQs](#).

Step 1:
 Select the improvement areas you are interested in viewing data for (multiple selection is possible). Note: Improvements are split into two groups: those with extensive benefit data and those with only limited data. To view what improvements have limited data, click the [here](#) link. Accordingly, please view our [improvement area matrix](#). To view more details about CMM and CMMI improvements [click here](#).

Extensive Data Available
 Agile/Scrum
 CMM Software Process Improvement
 CMMI Process Improvement
 Gleamroom
 Metrics
 Measurement Program
 PSP / TSP
 Reuse
 Limited Data Available

Benefits of SPI

Gold Practices – Practical Guidance

DWCS On-line Learning Center

Software & Web Development Online Training

Complete Reports	
Agile Software Development (Abstract and PDF)	A Business Case for Software Process Improvement REVISED (HTML and PDF)
A History of Software Measurement at Rome Laboratory (HTML)	A Review of Formal Methods (HTML)
A Review of Non-Ada to Ada Conversion (HTML)	A Study of Software Management: The State of Practice in the United States and Japan (HTML)
An Analysis of 2 Formal Methods: VDM and Z (HTML and PDF)	Analyzing Quantitative Data Through the Web (HTML)
Artificial Neural Networks Technology (HTML)	COTS Based Software Development and Integration (HTML and PDF)
Embedded Software Maintenance (Abstract and PDF)	Mining Software Engineering Data: A Survey (HTML and PDF)
Knowledge Management in Software Engineering (Abstract and PDF)	Software Tools for Knowledge Management (Abstract and PDF)
Modern Empirical Cost and Schedule Estimation Tools (HTML and PDF)	Object-Oriented Database Management Systems Revisited (HTML and PDF)
Present Value of Software Maintenance (HTML)	Rome Laboratory Research in Software Measurement (HTML)

System Reliability Toolkit

A Practical Guide for Understanding and
Implementing a Program for System Reliability



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Reports on Topics of Interest





STINFO Resources of Interest to Software Acquisition Community

- Reports
 - System of Systems Cost Estimation
 - Software Reliability
 - ROI of Process Improvement
 - Gold Practices
 - Formal Risk Management
 - Standards/Open Systems
 - Manage Requirements
 - Metrics Based Scheduling
 - Track Earned Value
- Training
 - Software Affordability
 - On-Line Training
- Newsletters
 - IP and Software
 - Service Oriented Architectures
 - Open Source
 - Performance Results from CMMI
 - Measurement
 - many more...





DACS Expertise

Focus Areas

- Software Testing
- Software Quality
- Software Reliability
- Agile Development
- Software Architecture
- Process Improvement
- Measurement
- Cost Estimation
- Information Technology
- Software/IT Training
- Net Centric Operations
- Software Economic Analysis
- Information Fusion
- Software Producibility
- Software Intensive Systems Engineering
- Software Assurance
- Advanced Computing Architectures
- System Modeling and Simulation

Established Relationships with World Class Experts Provides
State of the Art and Timely Scientific and Technical Information

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ADA School, FCS, and Warfighter Support

Combat Architectures

- Supported Multiple Major Army Studies over 25 Years
- Supported Development of Requirements / JCIDS Documentation for Major Army Combat and C2 Systems
- Supported Organizational Design
- Support Future Army BMC4I Architecture / Concepts Design
- Performed Integrated Systems Analysis
- Performed Regional Coverage Analysis

FUTURE FORCE ARCHITECTS



Training Development

- Support Development of Training and Doctrinal Products:
 - Field Manuals
 - Graduate Level Training Courses
 - OIF Lessons Learned Database / Tracking
 - Training Plans and Support Packages
 - Scenario Generation for Multi-Echelon Training
- Web page design and implementation

**FUTURE /
CURRENT FORCE
TRAINING
PRODUCTS**



Operational AMD Unit

- Support to 32d AAMDC and ADA Brigades / Battalions in:
 - Training, Operations, Personnel, Communications (JTIDS), and Logistics
 - Executed AMD Training -30 exercises per year at Drive Up System Training Facility
 - Contingency Operations
 - OIF (Deployed)
 - ONE (Deployed)
 - OEF
 - Provide Information Technology services

**SUPPORTS THE
WARFIGHTER**



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For More Information...

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